The Bacteriology of the Blood; its value in Diagnosis and Treatment.

Abstract of paper read before the Abernethian Society on December 8th, 1904.

By Dr. THOMAS J. HORDER.

THE blood in health is free from micro-organisms, as are also the solid organs of the body. The natural defences of the tissues against infection by the various microbes which infest the mucous membranes and the skin are being constantly called into play. These natural defences are highly successful. Even the mesenteric glands have been proved to be sterile during life. But the natural defences may be broken down, and organisms may invade the blood stream and multiply therein: this is septicæmia. After death the matter is very different; the blood and organs are often found to be invaded by bacteria which are not necessarily the organisms of putrefaction, but are often germs which, during the act of dying, have succeeded in passing the barriers which were so effectual during life. This invasion during the death agony may be demonstrated even before death occurs. Still later come the putrefactive organisms, constituting what the pathologist terms "P.M. contaminations" in contra-distinction to the causal organisms of disease, towards which his search is strictly directed.

The blood may thus become the nidus of bacteria under three different conditions:

During life.—I. *Septicæmia.* { (1) Early infection. (2) Terminal infection.

During death.—II *Agonal invasion.* { (1) Homologous. (2) Heterologous.

After death.—III. *Putrefaction.*

Just as it is impossible to say when a patient commences to die, so it is impossible to draw a hard and fast line between cases of true septicæmia and cases of agonal invasion. And the value of knowing that such a thing as agonal invasion does occur only consists in this,—it warns us against assuming that every organism isolated from the blood or tissues post-mortem, even if in large numbers and in pure culture, has been instrumental in producing death. Since we can never certainly say that a patient is dying, we never speak of organisms found in the blood before death as being due to agonal invasion, though we may sometimes think that they are: we prefer to say that the patient is suffering from septicæmia. If death takes place within an hour or so after the discovery of the organisms, especially if the illness has not been of very short duration, we know that the infection was of the agonal type; but this knowledge comes only by looking backwards. The form of the invasion during death may be by organisms which have previously been the causal agents of the patients' disease (homologous), or it may be by other organisms, which are sufficiently ubiquitous to be handy when the defensive mechanism breaks down, such as *Streptococcus* and *B. coli communis* (heterologous). Some pathologists draw no distinction between terminal infections and agonal invasions, but I think the distinction not only a real but an important one. Against a terminal infection there is usually some sort of reaction,—a leucocytosis is common, for instance, and fever is often present; against agonal invasions, however, no struggle is made, and there is no sign that the event is occurring. Again, terminal infections may last for some days, or even longer than a week, whereas agonal invasions are of very brief duration.

These remarks refer only to microbes existing in sufficient numbers to allow of demonstration by known bacteriological methods. There are ample reasons for knowing that a very few organisms must be present in the blood in many diseases other than septicæmia. Thus bacteria are excreted by the urine in typhoid fever, in pneumonia, and in phthisis. This means that the organisms pass from the focus of disease to the kidneys through the blood stream. In gonorrhœal arthritis, where the gonococcus can at times be isolated from the fluid of the affected joints, the organism must have traversed the circulation. But in these cases the organisms exist in too scanty numbers to be demonstrated during their passage from place to place. When organisms can be demonstrated in the blood, therefore, it may safely be concluded that multiplication of them is taking place in the blood, that is, that septicæmia is present.

The available *methods of examining the blood* for organisms are three:—(1) *Blood films* may be made directly, and stained by some basic dye, as gentian-violet, carbol fuchsin, or Romanowski's stain. This method demands that the organism shall be present in very considerable numbers, and is therefore not of great service, but, as it is so simple, and can easily be combined with an examination directed towards the variety of leucocytes present, it should not be omitted. (2) The second method is to bleed the patient and to *inoculate some suitable animal* with the blood. This is obviously not a convenient method, but it may be reserved for special cases. (3) The third is that of *blood-culture*, by which various nutrient media are inoculated with blood, which is obtained with strict antiseptic precautions. This is the method in general use.

Until recently the blood was obtained by pricking a finger. There are two objections to this process: the amount of blood obtainable is limited, and there are great risks of contamination of the blood by organisms from the patient's skin or from the air. The first objection is entirely, the second almost entirely, overcome by taking the blood from a vein of the arm by puncturing it with a sterile hollow needle, the skin previously being sterilised as far as possible. As only a minute area of skin is dealt with, the number of contaminating organisms likely to be cultivated is very small, and they are easily eliminated when seen. Air-organisms should not occur at all as contaminations. The

method is really fraught with very little pain, provided a sharp needle be used and the skin promptly and completely pierced. I have used this method in quite young children without evoking tears, which is a fairly severe test.

Points in technique.—The arm is chosen in which the largest veins are seen beneath the skin of the ante-cubital fossa. The patient lies near the edge of the bed, on the same side as that of the arm chosen, and in a good light. The skin is scrubbed with soap and water for five minutes, and covered with a piece of gauze wrung out of 1 in 1000 perchloride or biniodide of mercury. A 5-c.c. all-glass serum syringe * with its needle are boiled in a beaker, and in a small wide-necked flask is also boiled a solution of sodium citrate of strength ·5 per cent. The citrate solution is cooled down until it just feels warm to the hand. The arm is now allowed to hang out of the bed, and two or three turns of bandage are taken round it, well above the elbow. The roll of bandage is squeezed by the patient's hand. A vein is probably by these means made prominent. (If no vein is seen the skin must be pierced, and then the needle must be moved in one or two directions until blood enters it, showing that a vein has been punctured.) The syringe and needle, which have not been removed from the beaker, are now fitted together, and the junction is tested with the sterile water; enough of the citrate solution is then taken up to fill the needle and prevent clotting of the blood. The gauze is now removed, and ether is poured over the skin. The patient's arm is held at right angles with his body. The operator stands with his back to the patient and punctures the vein in the direction against the venous circulation. In making the puncture the needle must be thrust quite through the skin, but its direction should then be almost parallel with the surface, so as to avoid piercing both walls of the vein. The *only* sign of a successful puncture is to see the blood flow slowly into the syringe without employing suction. When this happens the piston may be gently withdrawn before the incoming blood until the syringe is filled, but a well-fitting glass piston will often be pushed almost to the top of the syringe by the stream of blood, unaided by suction. In any case suction must be employed very carefully, as this action may lead to air being drawn through the junction of needle and syringe, or may draw the wall of the vein into the needle and thus block it. The syringe being full the needle is promptly removed, and the operator's finger is pressed against the puncture whilst the bandage is removed and the arm is raised. The puncture rarely bleeds, and therefore seldom needs any dressing. The blood is now transferred from the syringe to a series of broth and agar tubes as quickly as possible. Different dilutions are made in six broth tubes, from one containing a few drops of blood to 10 c.c. of broth up to one containing 2 or 3 c.c. of blood to 10 c.c. of broth. The objects are (i) to dilute any antibodies which may be present and prevent growth of the organism, and yet (ii) to have a good bulk of blood in one or two of the tubes so that if the organisms are very scanty they may still be cultivated. After inoculation the tubes are rolled between the hands and are then placed in the warm incubator (37° C.), *where they are allowed to remain absolutely undisturbed.* In this way the blood is found in a few hours to have clotted, the red cells sinking to the bottom of the tube, leaving a semi-translucent clot suspended in the broth in which colonies of any organism present may develop. The tubes are examined in eight, twelve, twenty-four, forty-eight, and seventy-two hours. The examination of the tubes is a matter of bacteriology.

* Such as is made by Messrs. Burroughs and Wellcome.

Elimination of contaminations.—This, as I have said, is not difficult, especially in the cultures taken upon solid media, where the colonies are isolated. But solid media are not really necessary. I have never grown any organism on solid media which did not grow better in broth. This is worth remembering, because it sometimes happens that broth is the only culture medium available; when this is so, no fear need be entertained that a negative result is due to the lack of solid media. The commonest contaminations are *Staphylococcus epidermidis albus* from the skin and various *Sarcinæ* from the air. The latter are quickly disposed of; the former is distinguished from *S. pyogenes albus* by its very white appearance in subculture, by its liquefying gelatin only after some days, and by the absence of pathogenicity. If this method be used contaminations are quite uncommon.

With regard to the number of colonies obtained, it is probably true that the more numerous they are the more decided the test is, and the more serious, *cæteris paribus*, the patient's condition. But I do not think we can argue much more on this ground. The test is chiefly qualitative, not quantitative.

Turning now to the *results* of blood examinations for bacteria, the following organisms have been obtained upon so many occasions that these can no longer be kept count of:—*Streptococcus*, *Staphylococcus pyogenes aureus*, and *S.*

DESCRIPTION OF PLATE.

Figs. 1, 2.—To illustrate blood culture in broth tubes. The blood-clot remains suspended in the medium, and the colonies develop in the clot. In 1 there are very few, and in 2 very many colonies. Third day.

Fig. 3.—To illustrate blood culture on Agar slope. A few colonies are dotted over the surface of the medium. Fourth day.

Figs. 1—3 are from a case of influenza endocarditis.

Fig. 4.—Colonies of *B. influenzæ* growing on Agar slope, highly magnified. They have been photographed a little from the side to produce a slight shadow. The dew-drop appearance is very typical. Fourth day.

Fig. 5.—Colonies of *Gonococcus* on blood. Agar plate. Third day. Typical appearance.

Fig. 6.—A single colony of *Gonococcus*. Seventh day.

Figs. 5, 6, are from a case of *Gonococcus endocarditis*. The best result was obtained by pouring the blood straight on to Agar plates.

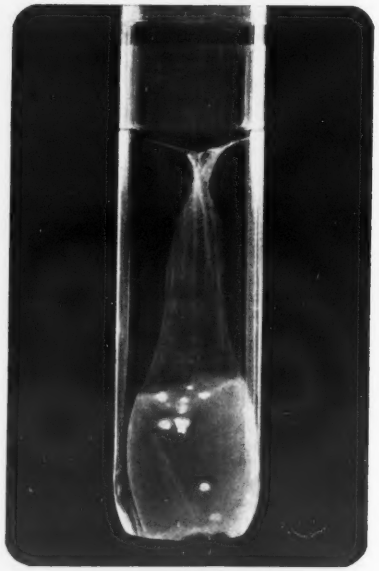

Fig. 1.

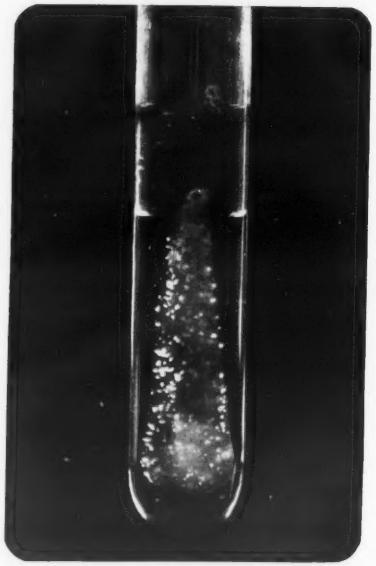

Fig. 2.

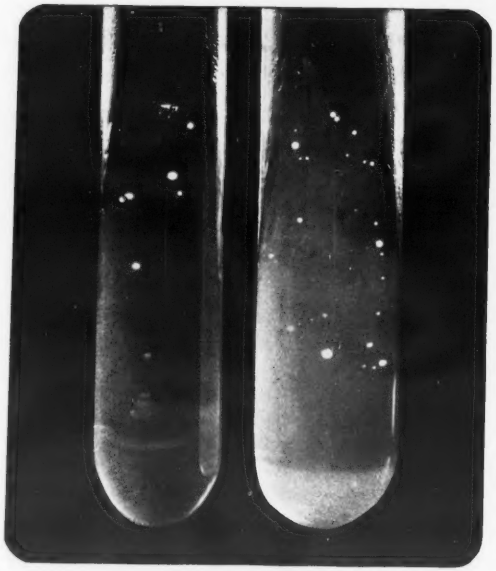

Fig. 3.

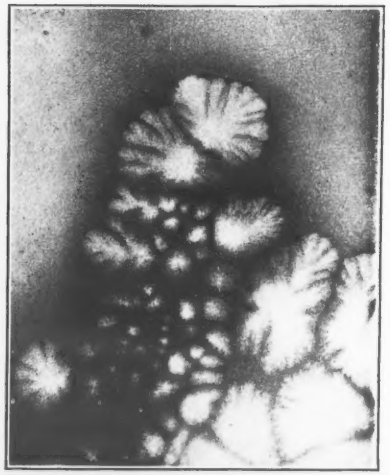

Fig. 4.

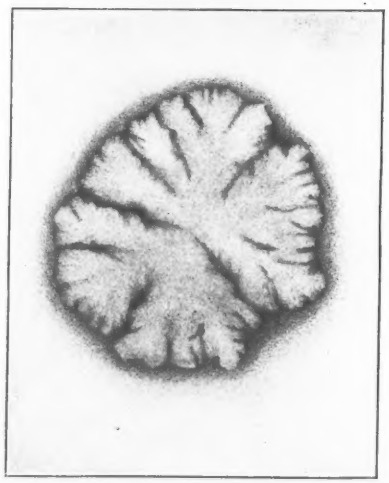

Fig. 5.

Fig. 6.

pyogenes albus, *Pneumococcus*. Of other organisms the *Diplococcus rheumaticus*, which some authorities hesitate to accept as an organism distinct from *Streptococcus*, has been obtained several times. So also have the bacilli of *tuberculosis*, *typhoid fever*, *plague*, *anthrax*, and *glanders*. The *Gonococcus* has been obtained perhaps some eight or nine times; the *Influenza bacillus* * twice and the *Meningococcus* once.

As regards the proportion of cases examined which yield positive results, it is necessary to consider the nature of the cases. In those where the clinical evidence of septicæmia is strong, the proportion of positive results is much greater to-day than formerly. But there is a tendency to extend the method to other cases, where the clinical evidence of septicæmia is slight or altogether wanting. This tendency should not be discouraged. But it necessarily follows that of the total cases examined there will be a smaller proportion of positive results. These facts are well illustrated in a series of blood-cultures which I have done during the past twelve months. I find that during the past fourteen months I have examined the blood by cultivation 56 times, with 23 positive results. Of these 56 cases, however, only 28 showed undoubted evidence, ante- or post-mortem, of septicæmia. The remaining cases were either proved to be sapræmic in nature or the test was experimental—done with the hope of finding some organism present in the blood of patients suffering from diseases of obscure origin, such as pernicious anæmia, leukæmia, etc. Excluding these, the proportion of positive results has been 23 out of 28, or 82·1 per cent. This contrasts very strikingly with the results obtained by the older method of blood examination, where it was very much less successful, although actual figures are difficult to get. These twenty-three positive blood-cultures were done upon eighteen patients, six cultures being repetitions at later dates. Excluding these repetition cultures there were therefore fifteen positive results in nineteen cases, giving a percentage of 78·9 positive results. These results justify the conclusion that a negative blood-culture gives very strong presumptive evidence against the presence of septicæmia. An analysis of the 15 cases shows that the nature of the organism was—

Streptococcus	in 9 cases.
Pneumococcus	in 2 cases.
S. pyogenes albus	in 1 case.
Gonococcus	in 1 case.
Bacillus influenzæ	in 2 cases.

The diagnosis in the streptococcus cases was made at periods before death varying from four and a half months to two days. In the pneumococcus and the staphylococcus cases the organism was cultivated ten days before death. The patient suffering from gonococcus septicæmia was admitted to this Hospital under Dr. Ormerod as a supposed case of typhoid fever. Four days after admission, however, a blood-culture showed the presence of organisms in the circulation which had all the morphological and cultural features of the gonococcus. The culture was repeated twelve days later, with a similar result. On each occasion the number of colonies obtained was very numerous. Of the cases of gonococcus endocarditis previously described, I find that the longest period before death at which the diagnosis was made was nine days. In Dr. Ormerod's case the diagnosis was arrived at no less than twenty-eight days before death. I believe I am correct in saying that this is the first case in which the gonococcus has been cultivated from the blood of a patient in England.

The case of influenza endocarditis was a patient under the care of Dr. Gee suffering from aortic disease with fever. The blood-cultures were performed upon four separate occasions. Three of the cultures grew the organism in abundance; the fourth, in which the blood was spread upon the surface of agar plates, gave one colony only. Although at the first culture the characters of the organism seemed those of the influenza bacillus, I hesitated to accept this conclusion because I had no knowledge of such a condition as influenza endocarditis. As succeeding cultures resulted in growth of the same short bacillus as the first, and the subcultures were exceedingly characteristic of the influenza bacillus, the conclusion became inevitable. Dr. Klein gave a definite opinion that the organism was that of influenza. I then sent a couple of films to Professor Pfeiffer at Berlin, who confirmed the matter. This would seem to be the first instance of influenza endocarditis on record. The first culture was obtained forty-one days before death.

Prognosis.—My having repeatedly referred to the date of a positive blood-culture as being made so many days "before death" suggests that the finding of bacteria free in the blood-stream is of very bad omen. And so it is. I doubt if any other discovery made in a patient, save, perhaps, that of the presence of an inoperable new growth, is of worse prognosis. And when the septicæmia is of the endocardial type the outlook is still more grave. Yet every now and again cases of undoubted septicæmia recover, as also, less often, do cases of infective endocarditis. In not many of these cases which recover, however, are organisms cultivated from the blood. And this is the only pathognomonic evidence that septicæmia is really present. In none of the cases I have mentioned did recovery occur, although, as I said, the diagnosis was made in one instance as early as four and a half months before death. With regard to the bearing that the particular organism has upon prognosis it would seem that *Staphylococcus pyogenes aureus* and some species of streptococcus are the most virulent, and may be fatal in a few days. The pneumococcus runs these fairly close, and

* Since reading this paper I have a second time grown the influenza bacillus from a case of septicæmia. From its unusual interest I have included it in the statistics below.

is apt to be quickly fatal. Rufus Cole has recently reported finding the pneumococcus by blood-culture in nine out of thirty severe cases of pneumonia; all the nine cases ended fatally, and all within three days of the examination. The gonococcus cases last from three weeks to two months. Some streptococcus cases are chronic; one of my cases lasted eight months. The most chronic of all the cases seem to be those due to *Staphylococcus pyogenes albus*. My case having this infection certainly lasted more than two years. I may point out that as this method of blood cultivation becomes more extensively employed, and organisms are found more often, the prognosis will be better than it is at present. It will also be better for another reason—the diagnosis will be made earlier in the course of the disease, and treatment be directed accordingly.

Treatment.—If it be true, as we must all admit, that the essence of treatment is diagnosis, it follows that however unsuccessful the treatment of septicæmia is at present, better results can only be hoped for by the establishment of early and complete diagnosis.

Patients suffering from obscure febrile diseases are often treated on purely expectant lines for days, weeks, or months, until certain signs appear which make the diagnosis clear. This may be inevitable, but it must not be so considered until blood-cultures are found to be negative, whereas an early blood-culture may save much time. In cases of heart disease the same thing often happens. Infective endocarditis is such a common disease that it should always be suspected when the combination of fever with the signs of endocarditis is present; and it must not be forgotten that fever is not constant, even with marked ulcerative endocarditis. As compared with the question of leucocytosis, a positive blood-culture is infinitely more important, for leucocytosis is not specific, the discovery of an organism in the blood is. Nor is it safe to *assume* that what seems clinically to be a case of septicæmia should be treated by antistreptococcus serum. One of the pneumococcus cases and the gonococcus case to which I have referred were treated by antistreptococcus serum until the result of the blood-cultures demonstrated that the nature of the infection was not streptococcal.

The indications for treatment of patients suffering from septicæmia are of four kinds—(1) the natural defensive mechanism of the patient must be encouraged by what may be broadly termed stimulant treatment, *i. e.* plenty of fresh air and light, nutritious food, rich in hæmatogenous articles, and alcohol. If the case is a chronic one I think that open-air treatment should be given a systematic trial. (2) The second indication is the use of blood antiseptics. But here our therapeutics are notoriously weak; quinine, salicylates, sulpho-carbolates, mercury, and perchloride of iron have all of them some claims for being regarded as germicidal agents when taken as drugs, but they mostly fail us in crucial cases. There is no doubt that, if given at all, they should be given boldly. We know very little as to the possible use of such antiseptics as formalin. I have used formalin by mouth in cases of septicæmia, but without any good effect. In the absence of animal experiments, I have not yet used it subcutaneously or intra-venously. (3) The third indication is to stimulate leucocytosis, seeing that we have reason for thinking that in that way some bacteria are combated. The drugs used for this purpose are the nuclein group and cinnamate of soda. I have no personal experience of these substances in treatment. (4) The fourth indication is to check the growth of the organism by the administration of a suitable bactericidal serum if such exists. This last form of treatment has had considerable vogue of late, but the results hitherto obtained have been extremely unsatisfactory. I am, of course, still speaking of cases of septicæmia,—cases in which the organism exists free in the blood. There seems no reasonable doubt that cases of sapræmia are not infrequently benefited or cured by sera. But here it must be remembered that many cases of intoxication end satisfactorily without such treatment, and often somewhat abruptly. In serum treatment, next to an early diagnosis, the most important thing is the liberal use of a fresh serum. The bactericidal serum for which the most claims have been urged is the anti-streptococcus serum. Unfortunately there is little doubt that different strains of streptococci vary much amongst themselves, and a serum immunised against one will not necessarily be immunised against another. Moreover, the introduction of polyvalent sera has mended matters but little, since a polyvalent serum is one in which streptococci from *different sources* have been used in its production, not streptococci possessing known *differences in reaction*. In a given case of Streptococcus septicæmia, which has received no benefit from either of the sera on the market, there is still one other thing that can be done, although it is not practicable except in chronic cases,— a special immune serum may be prepared by use of the particular organism obtained from the blood culture. This I did in one case early this year, with the co-operation of Messrs. Burroughs and Wellcome and Dr. Dowson.* The cases of *Pneumococcus septicæmia* were also treated by serum.† Despite the present discouragements, it is in serum treatment that hope lies in the future.

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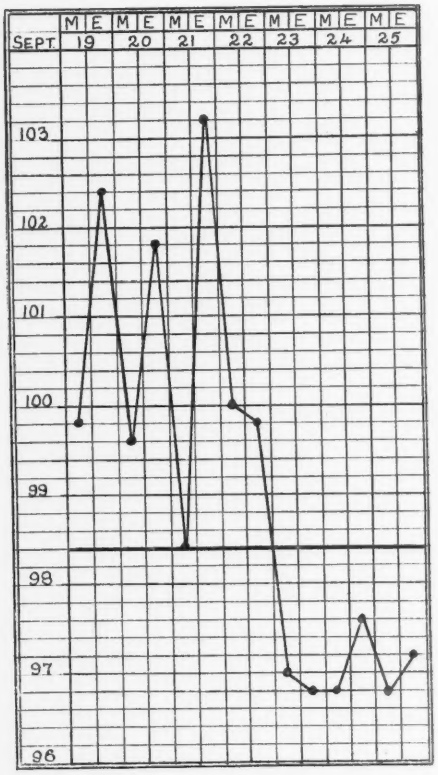
* See *Lancet*, July 16th, 1904.

† See *Lancet*, June 4th, 1904.

(iv) It is entirely free from danger, and, in my opinion, hastens convalescence.

In the following series of cases, which I think bear out these contentions, I would call special attention to the first, where the benefit was immediate and striking. I am indebted to my colleagues at the Metropolitan Hospital for permission to publish those cases which were under their care.



CASE 1.—A lad, æt. 18, was admitted under care of Mr. Ashdowne, on September 19th, 1904, with the following history:—About two months before he had resection performed in an infirmary for empyema of the right side. Soon after his discharge he began to have pain in that side again. When he was brought to the hospital the scar was tense and glazed, and could be made to fluctuate. The skin around was red, tender, and œdematous. There were signs of fluid at the right base. He was admitted for operation, but the scar gave way and offensive pus discharged freely. He also coughed up offensive pus.

On September 22nd I saw him with Mr. Ashdowne. The pus was still very offensive, and his temperature was hectic, rising in the evening to 103·6°. The cough was incessant. Daily iodine baths were recommended with immediate result. The pus lost its fœtor, the discharge rapidly diminished, the temperature never rose above normal again, and the cough ceased.

On October 3rd only a small granulating wound remained. The baths were discontinued.

On October 8th the wound healed completely, and the patient went home.

CASE 2.—A child, æt. 2, was admitted under care of Dr. Davies, on November 12th, 1903, with empyema on the right side. Resection was performed, and a pint of pus let out.

I saw him on December 5th. There was still much discharge; the temperature had risen to 103°, and the pulse to 156. Iodine baths were recommended for fifteen minutes daily. The discharge became much less, and the temperature only rose once more. After that the notes read as follows:

December 27th.—Lung expanding. But little discharge.

January 5th.—Very little if any discharge. Child quite well.

January 17th.—Sinus closed. Child quite well. Discharged.

CASE 3.—A boy, æt. 11, was admitted under care of Mr. Harmer, on December 16th, 1903, for general purulent peritonitis, found by operation to originate from a gangrenous appendix.

On December 23rd he developed signs of empyema at the left base. Resection was performed, and the pus was found to have a fæcal odour. Stained films of the pus showed diplococci with proteus bacillus and other organisms.

On December 24th the boy was still very ill and the discharge offensive. Antistreptococcic serum was employed. He improved for a time, but on January 18th, when I saw him with Mr. Harmer, his temperature was hectic, and had reached 103·8° the evening before. The discharge was very offensive, and the boy seemed very ill. The physical signs suggested a collection of pus which was not draining. Under an anæsthetic the empyema wound was enlarged, and half an inch more bone was cut away. The finger was introduced and adhesions freely broken down. Some two ounces of foul pus was cleared out. After this he was much improved, but as the temperature began to rise again, and a discharge of two ounces of foul pus occurred, on January 25th iodine baths were begun. From that date to his discharge in March the notes only contain a record of steady improvement.

CASE 4.—A boy, æt. 4, was admitted under care of Dr. Davies with signs of empyema.

On July 11th, 1904, a portion of the seventh rib was resected on the right side, and a pint of pus evacuated.

On July 21st iodine baths were begun.

On August 17th the drainage-tube was discontinued, and the lung was expanding well. The wound soon closed.

Here nothing can be claimed for the bath treatment as the case was going on quite well previous to its use.

CASE 5.—A man, æt. 26, was admitted under my care on September 5th, 1904, with pneumonia involving the left lung and the upper and middle lobes of the right lung. The man was very seriously ill, but on September 15th the crisis occurred. After this the temperature began to rise again.

On September 19th there were signs of fluid at the left base. An exploring needle removed a small quantity of pus containing pneumococci. As the right lung was resolving it was decided to delay operation until September 23rd, when resection was performed, and ninety-six ounces of pus were evacuated.

On October 4th the temperature, which had been lower since the operation, began to assume a hectic character. Iodine baths were ordered, but owing to a difficulty with the bath they were not employed regularly till October 9th, when they were followed by a marked improvement both in temperature and the amount of discharge. They were continued up till October 31st.

The convalescence was tedious because the sinus healed very slowly, but patient had no constitutional symptoms after the baths were employed regularly.

The two following cases were not seen by me, and I add them to complete the record of cases in which this method has been used at the Metropolitan Hospital.

CASE 6.—A boy, æt. 6½, was admitted under care of Dr. Cautley, on July 20th, 1904, with empyema of left side. Resection of one inch of the sixth rib was performed in the posterior axillary line, and more than a pint of pus evacuated. Iodine baths were employed from August 3rd. On September 27th he was discharged cured.

Here the temperature does not seem to have been affected by the baths. It was irregular throughout, and was not quite regular even when patient was discharged to a convalescent home.

CASE 7.—A boy, æt. 15, was admitted under care of Dr. Haig, on February 27th, 1904, suffering from pneumonia of the right base complicated by chronic parenchymatous nephritis. Pneumonia was followed by empyema on the same side, for which resection was performed on March 11th. Recovery was very slow, and on May 3rd the temperature rose to 102·6°. Much pus was still discharged, but it was thought that there was some pocket containing pus which did not drain properly. Iodine baths were started.

On May 24th patient was able to be discharged, his wound having closed, and his general condition being very satisfactory. The urine contained only $\frac{1}{8}$ of albumen per 1000.

Here the contrast between the tedious character of the case before with the rapid recovery after the bath treatment is very marked.

This method was also attempted in a case of basal cavity (probably bronchiectatic) which had been treated by external drainage. The case, which was under Dr. Davies' care, has been fully reported in the *Lancet*, 1904, ii, p. 24, by Mr. Denham White. Here the baths had to be discontinued because of the coughing they excited, but this drawback does not seem to occur where the fluid enters the pleural cavity and not the lung.

The Clubs.

STUDENTS' UNION.

A meeting of the Students' Union Council was held on Tuesday, February 14th, Dr. Herringham, the President, in the Chair.

In connection with the minutes of the last meeting, Mr. Harmer asked for information on the financial support which the proposed Year Book would receive. He suggested that the Publication Committee should undertake the responsibility for all financial questions connected with the Year Book. The suggestion was adopted.

Arrangements were made for the next annual election of the Council. It was decided that nominations should be sent in by February 22nd, voting by ballot should take place in the Abernethian room on March 1st, 2nd, and 3rd, and the Annual General Meeting held on March 9th at 12.30.

The desirability of having one of the Secretaries, or other member of the Council, as Senior Secretary on next year's Council having been discussed, Mr. Harmer gave notice that he would propose, at the Annual General Meeting—"That in future the outgoing Council shall have the power to recommend to the General Meeting of the Students' Union the Senior Secretary for the ensuing year." Mr. Hogarth gave notice that he would second that motion.

It was then agreed that Mr. Loughborough should be recommended as the Senior Secretary for next year.

A vote of thanks to the Secretaries for work done during the past year was proposed by the President, seconded by the Vice-President, and carried unanimously.

Abernethian Society.

ON January 19th Dr. E. M. Niall read a paper on "Some Notes on the Feeding of Infants."

On January 26th Mr. J. A. Willett, M.B., M.R.C.P., read a paper on the "Effects of Heart Disease on Labour."

On February 2nd Dr. J. W. W. Stephens read a paper on the "Transmission of Parasitic Diseases by Insects."

On February 9th a clinical evening was held, at which the following cases were shown:

By Mr. Neligan. A man, æt. 52, who for thirty years had suffered with various syphilitic lesions. He also had severe anæmia with a markedly enlarged spleen extending well below the umbilicus. At the present time his general condition was unaltered, but his liver was considerably enlarged and irregular in outline, while he also had homonymous hemianopia and absence of knee-jerks. Question of diagnosis was brought up, the general opinion being that it was syphilitic in origin. The most difficult point to explain was the examination of the patient's blood, which showed a leucocytosis of 70,00 twenty years ago, but now nothing abnormal was discovered.

Mr. Neligan also showed a case of pseudo-hypertrophic muscular paralysis in a man æt. 36. The disease had affected his pelvic girdle, now spreading to shoulder. His gait is very typical.

Mr. Hadfield showed a case of a boy, æt. 14, with great enlargement of spleen, the superficial glands being scarcely palpable, and no signs of intra-thoracic disease. The blood-count was—R.C. 4,389,000; W.C. 4,000; Hb. 76 per cent. Diagnosis lay between lymphadenoma and splenic anæmia.

Mr. Favell showed a case of extensive tophaceous gout.

ASSOCIATION FOOTBALL CLUB.

ST. BART.'S *v.* EMERITE.

This match was played at Winchmore Hill on February 1st. Bart.'s turned out at full strength, and the whole team played well. The distinctive features of the game were Hardwicke Smith's safe kicking at full back, the improvement in Burra and Lloyd at half-back, and last, but by no means least, the combination of the three inside forwards, Gordon, Cunninghame, and Holthusen. The outside wings and Armitage in goal had very little to do, but they did it well. The result was an easy win by 8 goals to 0. Team:

C. E. Armitage (goal); H. Rimington and H. Hardwicke-Smith (backs); J. R. Lloyd, A. Miles, L. T. Burra (halves); E. R. Evans, A. Holthusen, A. Cunninghame, F. J. Gordon, and S. Tucker (forwards).

ST. BART.'S *v.* WEST WICKHAM.

This match was played at West Wickham on February 4th. Bart.'s were not at full strength, Holthusen and Evans being away from the front rank. The result of a very nice game was a win for us by 4 goals to 1, scored by Gordon (3) and Cunninghame (1). Team:

C. E. Armitage (goal); H. Rimington, H. Hardwicke-Smith (backs); J. R. Lloyd, A. Miles, L. T. Burra (halves); W. H. Hodge, R. Riches, A. Cunninghame, F. J. Gordon, and C. B. Butcher (forwards).

ST. BART.'S *v.* R.I.E.C.

Bart.'s journeyed to Cooper's Hill on February 8th to play the return match. The ground was in splendid condition, and again we proved successful in winning by 5 goals to 2.

Our first goal came from a centre from Butcher, the ball going into the net off one of the opposing backs who tried to clear. The other goals were scored by Gordon (2), Butcher (1), and Holthusen (1). It was a vigorous game throughout, both sides using their weight rather more than was needed. Team:

C. E. Armitage (goal); H. Rimington, H. Hardwicke-Smith (backs); J. R. Lloyd, A. Miles, A. W. Weakley (halves); E. R. Evans, A. Holthusen, A. Cunninghame, F. J. Gordon, and C. B. Butcher (forwards).

INTER-HOSPITAL CUP-TIE.

The Association XI got through the second round for the Inter-Hospital Cup on February 14th, beating Charing Cross by 3 goals to 0. The play was interesting to watch, as Charing Cross had a good side and played a very keen game.

Bart.'s scored in the first ten minutes through Gordon, who ran through from halfway. After this play became rather vigorous, as is usual in a cup-tie, more attention being given sometimes to the man than the ball.

During the second half Armitage saved a penalty kick very cleverly, and the Hospital scored again through Cunninghame and Butcher—both very good shots.

Charing Cross failed to score, and the game ended Bart.'s 3, Charing Cross 0. Team:

C. E. Armitage (goal); H. Rimington, H. Hardwicke-Smith (backs); J. R. Lloyd, A. Miles, L. T. Burra (halves); E. R. Evans, A. Holthusen, A. Cunninghame, F. J. Gordon, and C. B. Butcher (forwards).

Linesman: A. Forrester.

Bart.'s now meet St. Thomas's in the semi-final on February 27th, at Honor Oak Park.

RUGBY FOOTBALL CLUB.

1ST XV.

February 4th.—*v.* Leytonstone, won 8 points to 3.
February 13th.—*v.* Guy's, lost 9 points to 0.

"A" XV.

February 1st.—*v.* Richmond, won 27 points to 5.
February 15th.—*v.* Merchant Taylors' School, won 72 points to 3.

2ND XV.

February 4th.—*v.* Leytonstone, lost.
February 11th.—*v.* Norwood 1st XV, lost.

The Leytonstone match should have been won by a larger margin, but the ground was like a hillside, and accurate passing was difficult.

The team suffered a most severe loss during the vacation, as A. H. Owen was "crocked" while playing for the London Welsh *v.* Newport. It has been impossible to replace him adequately, as Coombs and he combined splendidly at half.

Further disaster awaited the Hospital, as the day before the cup-tie Trapnell and Oulton were both disabled, which left us to face Guy's without the services of three of our three-quarter line and one half.

The forwards have played very well almost all through, and their combination was excellent against Guy's.

Had the men on the injured list been playing in the cup-tie match there is no doubt that the result would have been much closer, even if we had not won. It is extremely hard lines on all concerned, especially as the men had trained hard for the match, and were obviously much fitter than their opponents.

Congratulations to H. B. Owen, W. B. Grandage, and W. J. Pearson on playing for Middlesex County; also to H. B. Follitt and H. M. Coombs for Midland Counties.

The "A" team continues its brilliant career. The match *v.* Richmond was a very good game, as our opponents had a good side out.

The less said of the Merchant Taylors' match the better. We certainly had a strong "A" team out, but our opponents' tackling was of the feeblest description.

The 2nd XV have not met with much success, though they are keen enough. They suffer from a dearth of halves, and since Owen and Lee were "crocked," they have been worse off than ever.

ST. BART.'S *v.* GUY'S.

Played on Monday, February 13th. This, the concluding contest in the first round of the Hospital Cup competition, was played at the Richmond Athletic Ground on the above ill-fated date, in dull weather, the ground being in very good condition. A large and enthusiastic crowd of partisans turned out to see the match, Bart.'s being more strongly represented, both vocally and numerically, than has been the case for many a long day, a sign of improving times. The fates were against us, however, as we were unable to turn out with anything approaching a full team, four of our regular "outsides" being "crocked," two, Oulton and Trapnell, as recently as the previous Saturday! Keats and Way filled the vacancies at the last moment, our combination being thus disorganised, and our hopes of victory, once so high, being considerably diminished.

After the usual wearisome operations of the photographer had been gone through, our pent-up enthusiasm at last found a vent in a roar of welcome as our "chosen few" entered the arena, clad in the familiar black and white. No less energetic was the welcome accorded our opponents by their supporters, bedecked with purple violets and yellow primroses. Bart.'s lost the toss and had to play against the wind, Grandage kicking off. Even play resulted, both sets of forwards showing to advantage, and then occurred the smartest piece of combination seen during the whole game, resulting in Alcock scoring for Guy's, eight minutes from the start. Jones, the Guy's half, picked up smartly and gave to McEvedy, who, cleverly drawing his man, passed to Orpen, the latter running down, giving to Alcock just as With brought him down, Keats failing to stop the sturdy wing-man. McEvedy was unsuccessful with the place-kick, and the Bart.'s forwards redoubled their energies, packing and wheeling in perfect style, giving a sound exhibition of the science of forward play. Guy's, however, constantly neutralised their efforts by their wonderfully accurate touch-kicking, Husbands, McEvedy, and Stringer all shining in this department. Hot scrummaging occurred in our opponents' "25," but a bad pass by Gibson let up the Guy's forwards and Mullins forced his way over, the try not being improved. Way was then prominent in a smart run down the wing, Owen and he interpassing very cleverly, the movement being nipped in the bud by Husbands.

The interval arrived with Guy's leading by 6 points to love. In the second half our forwards were simply grand, and, had the three-quarters possessed better scoring powers, we must have won, the ball almost invariably coming out on our side of the scrum. Gibson was frequently at fault in giving and taking his passes, and many chances were lost. Keats also seemed unable to infuse any "devil" into his play, and thus the efforts of the forwards were nullified. From a free-kick Gibson made a splendid attempt to drop a goal, the ball only just falling short. A rush, headed by Grandage, Follitt, and Hoskyn was well stopped by Stringer, who found touch in our "25." Then, no one apparently attempting to stop him, Archer rushed through a loose scrum and scored a soft try, the place-kick again failing badly. A few more untiring efforts by our splendid forwards, a growing sense of despair and depression, a few last agonised appeals for victory, and the struggle was over, our hopes dashed for another weary year! Sic transit gloria mundi! One cannot help wondering though, what the report would have read like had Lee, Oulton, Trapnell, and A. H. Owen been fit and well!

HOCKEY CLUB.

So far this season the Hockey Club has been most successful, only having been beaten four times. This success is no doubt due to the fact that the same team is able to turn out regularly match after match.

On Thursday, February 9th, the team met Charing Cross in the first round of the Inter-Hospital championship at Richmond, and won by 8 goals to *nil*. There were a good many Bart.'s men present to watch the game, and we hope to see as many, if not more, when we meet Guy's in the second round.

ST. BART.'S *v.* CROYDON.

On Saturday, January 28th, at Croydon, Bart.'s defeated the home side by 7 goals to 2. This win was due to the excellent combination shown by the forwards. It should also be mentioned that Croydon were not at full strength. The goals were scored by Griffin (4), Adam (1), Gray (1), O'Neill (1). Team:

J. M. Postlethwaite, J. Griffin, L. L. Phillips, C. Elliott, B. H. Barton, G. F. Page, H. Gray, G. H. Adam, W. B. Griffin, A. O'Neill, L. F. Lewis.

ST. BART.'S *v.* R.M.A.

Played at Woolwich on Wednesday, February 1st. Bart.'s easily outplayed their opponents, in spite of the fact that three of the hospital's regular team were unable to play. Lewis, H. Gray, and Barton were in fine form. The goals were scored by H. Gray (3), W. B. Griffin (3), O'Neill (2), Adam (1). Team:

J. M. Postlethwaite, J. P. Griffin, C. Elliott, G. C. Gray, B. H. Barton, G. F. Page, H. Gray, G. H. Adam, W. B. Griffin, A. O'Neill, L. F. Lewis.

ST. BART.'S *v.* EPSOM COLLEGE.

On Saturday, February 14th. The Hospital travelled to Epsom, and defeated the College by 5 goals to 2, after a very fast and pleasant game. Lewis, Griffin, and Phillips were all very noticeable. Team:

J. M. Postlethwaite, L. G. Furber, L. L. Phillips, G. C. Gray, B. H. Barton, C. Elliott, H. Gray, G. H. Adam, W. B. Griffin, A. O'Neill, L. F. Lewis.

ST. BART.'S *v.* CHARING CROSS HOSPITAL.

Played at Richmond on Thursday, February 9th. In the first half the Bart.'s team was all at sea. Their combination was bad, and shooting worse. By half time the score stood at 3 to *nil* in our favour, the goal scored by Adam from a corner hit being a very fine one. In the second half Bart.'s got together much better, and were pressing nearly the whole time, Lewis and O'Neill being prominent several times. Furber, at back, played a very steady, sound game throughout. Five more goals were added in the second half without Charing Cross being able to score at all. The goals were scored by Griffin (3), O'Neill (3), Adam (2). Team:

J. M. Postlethwaite (goal); L. G. Furber, L. L. Phillips (backs); G. C. Gray, B. H. Barton, G. F. Page (halves); H. Gray, G. H. Adam, W. B. Griffin, A. O'Neill, L. F. Lewis (forwards).

ST. BART.'S *v.* WOOLWICH GARRISON.

Played at Woolwich on Saturday, February 11th. The Hospital were very lucky in winning, as the home team had considerably more than half of the game, and about midway through the second half were leading by 3 goals to 1. However, by means of vigorous rushes, the Hospital managed to score 3 more goals, thereby winning by 4 goals to 3. Griffin, Furber, and Postlethwaite were all in fine form. The goals were scored by Griffin (2), Page (2). Team:

J. M. Postlethwaite, L. G. Furber, L. L. Phillips, C. Elliott, B. H. Barton, G. F. Page, H. Gray, G. H. Adam, W. B. Griffin, A. O'Neill, L. F. Lewis.

CLUB RECORD.

	Matches played.	Won.	Lost.	Drawn.	Goals. For.	Goals. Against.
1st XI	20	15	4	1	89	49
2nd XI	15	8	7	—	50	46
3rd XI	11	3	7	1	38	73

We offer hearty congratulations to our representatives in the following United Hospitals Hockey Club matches.

v. HOCKEY ASSOCIATION on March 1st.

J. M. Postlethwaite (goal), M. R. Coalbank (back), E. M. Glenny (forward). *Reserves.*—L. L. Phillips (back), G. F. Page (half).

v. ESSEX C.H.A. on March 8th.

L. L. Phillips (back). *Reserve.*—G. F. Page (half).

v. BERKSHIRE C.H.A. on March 15th.

E. T. Glenny (forward). *Reserves.*—L. L. Phillips (back), G. F. Page (half).

INTER-HOSPITAL CROSS COUNTRY COMPETITION.

The race for the Inter-hospital Cross Country Ten Mile Challenge Cup was held over the Blackheath course on Wednesday, February 15th. The following hospitals entered :—St. Bartholomew's (holders), Guy's, London, and Royal Dental. The course was in good condition, though the wind coming over the Heath made the last two miles decidedly stiff. Birt, Dawson, and Candler kept together till about half-way, being then about a hundred yards ahead of May, who in turn was followed by R. McC. Linnell, S. W. Linnel, Townrow, Snowdon, and Field. From here the leaders tailed out, Birt going strongly ahead, followed by Candler and Dawson. Unfortunately a little later Birt mistook the course; but this made little difference to his position, for he easily led the field for the rest of the way. The officials, however, disqualified him. Bart.'s won, obtaining 1st, 3rd, and 6th places (10 points), London being second with 4th, 5th, and 8th (17 points), Guy's third (26 points), Royal Dental fourth.

ORDER OF FINISHING.

		Min.	Sec.
1. A. L. Candler	Bart.'s	60	56
2. G. Dawson	Dental	61	54
3. W. H. M. May	Bart.'s	63	13
4. R. McC. Linnell	London	64	53
5. S. W. Linnell	London	66	53
6. A. R. Snowdon	Bart.'s	66	54
7. V. Townrow	Guy's	67	36
8. W. V. Field	London	67	56

G. C. Birt's time was 60 min. 9 secs.

Rainey (London) won the handicap with 18 min. start; S. W. Linnell (8 min. 30 sec.) was second, and Townrow (8 min.) third.

Congratulations to A. L. Candler, W. H. May, and A. R. Snowdon on their success.

Candler's time this year was much better than last, but was 47 secs. behind Birt.

May who has been steadily improving this year shows signs of becoming a very useful runner.

Snowdon who was feeling unwell at the start ran extremely well and it was largely due to him that we beat London.

Beckton though well up early in the race did not maintain his position.

Two Men on a Part.

A TALE OF THE DISSECTING ROOM.

THE poet and the stolid man
Dissected side by side,
To strike some spark of feeling
From his mate the poet tried.

"My soul revolts," the poet said,
"Against this foul dissection!"
And with a sponge he wiped away
Some more escaped injection.

"'Tis sad to think," continued he,
"This body once had life!"
The solid man said nothing but
"Give me a sharper knife."

"That human forms should be so marred!"
The gentle poet sighed:
"You cut that artery yourself!"
The stolid man replied.

"Oh pause and think!" implored the bard:
Oh, rot!" rejoined the stoic,
"What vein anastomoses with
The gastro-epiploic?"

"Will nothing raise your petty mind
From mere anatomy?
Consider now the human frame,
It's form and majesty.

"See how its movements are controlled
And governed by the will"—
(The stoic murmured as he read,
"What is a 'goffered frill'?")

"How do we dare," went on the bard,
"Dissect a form so grand?"
And wistfully he cut away
A small lymphatic gland.

"The time has come," the stoic said,
"To read the small intestine,
To clean the kidneys, and remove
The bed of fat they rest in."

The poet meeting no response
In his dull friend's direction,
Began to write a poem on
"The poetry of Dissection."

ANON.

Round the Fountain.

Cabmen's wit is proverbial. However, the following *bon mots* are original.

Eminent Physician (directing cabby).—The College of Physicians as quickly as possible!

Cabby.—College of Physicians! never 'eard of it! (Then after sudden inspiration) Oh, I 'as it! You means the dirty end of the Union Club!

N.B.—The Union Club was painted and varnished during the autumn.

Visiting Physician (questioning patient as to his habits).—Do you drink much beer?

Patient (with a knowing wink).—*You knows* what it is to be out with a cab, sir!

The St. Bartholomew's Hospital Oxford Club.

THE second annual dinner of the above-named Club was held at the Trocadero Restaurant on February 1st. The chair was taken by Dr. Ferguson, of Cheltenham, who, in proposing the toast of the evening, made a very interesting and clever speech. He was glad to know that such a Club had been formed, and he was honoured to be chairman at the second annual dinner. He was of opinion that the Club should serve an excellent purpose, both of keeping all the Oxford men at the Hospital in touch with one another and with those who had left, and also of offering an attraction to medical students coming up from Oxford. He recounted with much delight his early experiences in London—how he visited all the hospitals in London, and was not satisfied until he arrived finally at St. Bartholomew's; thus it was that he came from the oldest University to the oldest Hospital. And now he felt proud to be sitting between two of his earliest teachers—Sir William Church and Mr. Langton, who was present as a guest of the Club. He proceeded to tell many stories about the Hospital in those days, and referred to Mr. Langton's very careful and accurate teaching of the correct method of finding the posterior tibial artery; but he was still waiting for the opportunity to make use of this piece of knowledge.

The health of the guests, of whom there was a goodly company present, was proposed in fitting terms by the Treasurer, Dr. Garrod. Dr. Norman Moore responded in his inimitable style, and referred to many interesting facts connected with the early history of the Oxford Medical School and of St. Bartholomew's. He would not have been surprised to hear that this Club had been in existence for several centuries, for there had been in the early days many alumni who were closely associated with both the great institutions.

After the health of the Chairman had been proposed by Sir William Church, a musical entertainment was set on foot. Dr. Samuel West and Mr. Holroyd very kindly sang songs, while Mr. Ferguson presided ably at the piano, and afterwards gave two musical sketches. The adventures of "Mrs. Cooper," as related by Mr. Burroughes, were much appreciated; and then after an Irish story by Dr. Norman Moore, a very old song, which used to be sung at Trinity College, Oxford, entitled "The Twelve Apostles," was given with great *éclat* by Messrs. Burroughes and Hogarth. And finally, after "Auld Lang Syne," we parted—some to bed and some to Dr. Thursfield's house, where the entertainment was continued.

The success of the evening was due mainly to the energies of the Secretaries, Dr. Thursfield and Mr. Priestley. It is to be hoped that members of the Club who are no longer at the Hospital will be able to attend in greater numbers next year.

Correspondence.

To the Editor of the St. Bartholomew's Hospital Journal.

SIR,—It has become a very noticeable fact during this session of the Abernethian Society that the attendance of men at the meetings is greatly falling off, especially among the members of the Junior Staff. There must be some reason for this, and through the aid of the JOURNAL I should be very pleased to hear any suggestions that men might like to propose in order to make these meetings more popular and more regularly attended than they have been of late.

Hoping, now that this has been brought to your notice, we shall be able to discover the cause and to rectify any fault on the part of the Society,

I remain,
Yours truly
W. GIRLING BALL.

To the Editor of the St. Bartholomew's Hospital Journal.

SIR,—I am studying midwifery at present, and am, to say the least, puzzled at the following from *Golden Rules of Obstetrics*, Management of the First Stage, Rule 6, "If there is a breech transverse, or any untoward head presentation, inform the friends, and *mention the risk to the child.*

Will someone be kind enough to tell me how to do this?

Bart.'s training on this point is deficient.

SILENT WORSHIPPER.

Review.

THE SURGICAL TREATMENT OF FACIAL NEURALGIA. By J. HUTCHINSON, Jun., F.R.C.S. (Bale, Sons, and Danielsson, Ltd.)

Commencing with a graphic account of the clinical features of various minor forms of neuralgia affecting the head, the author goes on to the description of "major" or epileptiform neuralgia affecting the branches of the fifth nerve. After detailing the different forms of extra-cranial operation, Mr. Hutchinson gives a clear and temperate account of the operation on the Gasserian ganglion by the Hartley-Krause method, with a summary of the results obtained, and advocates that the ophthalmic division should be spared in all cases where this seems justifiable. This he effects by making oblique section through the ganglion, leaving its inner part *in situ* with the ophthalmic division. The results ascribed to this method are excellent, and the advantages of retaining corneal and conjunctival sensation are of course very weighty. We recommend a perusal of the book to all who take an interest in cranial surgery.

The following books are still on hand for review. The Editor regrets that the reviews are unavoidably held over on account of lack of space.

Diseases of the Liver and Gall Bladder. H. D. Rolleston.
Manual of Hygiene. John Glaister.
Human Embryology. Arthur Keith.
Open-Air Treatment. F. W. Burton-Fanning.
Autobiography. F. J. Gant.
St. Bartholomew's Hospital Reports. 1904.

New Preparations, etc.

BRAND & Co., Mayfair, have sent us samples of their excellent products. They include Beef Essence, Beef Tea Essence, Beef Lozenges. Their palatibility combined with their highly nutritive and easily digestive properties make them peculiarly adapted to persons with gastric and intestinal diseases. The Beef Tea Essence seems specially useful. The lozenges may be nutritive, but they need to be taken with a bath bun to satisfy the cravings of the inner man.

We have just received from Messrs. BURROUGHS & WELLCOME their *Photographic Exposure Record and Diary*. Like everything that comes from this firm it is the essence of compactness, and yet nothing essential is omitted. No photographer should fail to read the excellent article on "Exposure." This subject, no doubt the greatest bugbear of amateurs, has all the difficulties smoothed out by an ingenious calculator at the end of the diary. The new arrangement for separately recording positive and negative exposures is, we think, a great improvement.

Messrs. BURROUGHS WELLCOME & Co. continue their tour of success at the various international exhibitions. During the autumn they were successful in gaining no less than 5 grand prizes and 7 gold medals for the exhibits from their various departments and laboratories at the St. Louis Exposition, and now they have just been awarded another grand prize for pharmaceutical and other products exhibited at the Cape Town International Exhibition.

Examinations.

CONJOINT BOARD.

Final Examination.

Midwifery.—B. H. Barton, H. J. Beddow, L. T. Burra, F. W. Griffin, C. M. Ilott, R. Jamison, H. J. Kimbell, T. C. Maxwell, E. G. Milsom, B. E. Moss, H. B. Owen, P. R. Parkinson, J. J. Paterson, J. G. Priestley, H. R. Prentice, J. M. Postlethwaite, K. S. Singh, H. D. Willis-Bund, N. H. Woodburn, E. L. Wright, H. N. Wright, F. P. Young.

Medicine.—A. W. Brodribb, W. S. Nealor, I. Thompson, E. Burstal, J. E. Pratt, K. S. Singh, H. G. Dickson, C. E. A. Armitage, J. Morris, C. D. M. Holbrooke, L. M. Rosten, C. B. D. Butcher, G. P. Jones, S. E. Crawford, F. B. Ambler, C. H. Cross, C. Clarke.

Surgery.—W. S. Nealor, J. R. R. Trist, L. M. Rosten, B. E. Moss, T. W. N. Dunn, F. S. Lister, R. Puttock, W. G. Ball, R H. Bott, C. H. Fielding, W. R. Collingridge, W. H. Orton.

The following have passed all the necessary examinations, and have obtained the diploma of L.R.C.P. and M.R.C.S.:

C. E. Armitage, F. B. Ambler, W. G. Ball, R. H. Bott, A. W. Brodribb, E. Burstal, H. G. Dickson, C. H. Fielding, F. S. Lister, C. D. Holbrooke, J. Morris, W. S. Nealor, J. E. Pratt, L. M. Rosten, I. Thompson, W. R. Collingridge.

UNIVERSITY OF LONDON.

Intermediate Examination in Medicine.

C. J. Armstrong Dash, F. G. Hodder-Williams, E. R. Jones, A. J. Kendrew, A. J. Symes, R. S. Townsend, E. de Verteuil, E. M. Woodman, H. O. Williams.

Appointments.

ARNOULD, L. A., M.R.C.S., L.R.C.P., appointed House Surgeon to the Stamford and Rutland Infirmary.

* * *

DAVIS, C. NOËL, M.R.C.S., L.R.C.P., appointed House Surgeon to the Royal United Hospital, Bath.

* * *

POPE, C. A. W., B.C.(Cant.), M.R.C.S., L.R.C.P., appointed Assistant House Surgeon to the South Devon and East Cornwall Hospital, Plymouth.

R.A.M.C. Notes.

THE following were successful at the recent examination for commissions in the Corps: W. S. Nealor, C. W. O'Brien, C. D. M. Holbrooke.

* * *

Col. J. M. BEAMISH retires on retired pay.

* * *

Capt. C. W. MAINPRISE has arrived from India, Capt. M. H. J. FELL from South Africa, and Capt. F. HARVEY from Malta. The latter is going through the promotion course at the R.A.M. College.

* * *

Capt. J. B. ANDERSON and Lieut. F. H. NOKE have embarked for India.

* * *

Captains H. A. BERRYMAN and J. B. ANDERSON have been promoted to the rank of major.

New Addresses.

CUNNINGTON, C. WILLETT, 48, Highbury Park, W.

JONES, A. W. LLEWELYN, Westeria House, Whiteparish, near Salisbury.

NICOLL, C. VERE, 4, Clifton Bank, Fairfield, Buxton.

PAIN, ARTHUR, 26, Sutton Street, Durham.

SAUNDERS, A. L., 112, Maida Vale, W.

WHITE, C. K., 1, Lee Brig, Altofts, Normanton, Yorkshire.

Birth.

PARBURY.—On January 21st, the wife of Frederick Denis Parbury, M.R.C.S., of "Tesses," Haslemere, of a daughter (stillborn).

Marriage.

JACKSON—WOOLSTON.—On February 2nd, at Wellingborough, by the Rev. E. P. Powell, Francis Willan Jackson, M.R.C.S., L.R.C.P., Hon. Captain in the Army, of Searle Lodge, Market Rasey, to Elsie Theodora Mary, younger daughter of Charles J. K. Woolston, Esq., J.P., of Croyland Hall, Wellingborough.

Death.

WELBURN.—On February 6th, at Wardington Vicarage, Banbury, Charles Matthew Welburn, M.R.C.S., L.R.C.P., aged thirty-nine.

NOTICE.

All Communications, Articles, Letters, Notices, or Books for review should be forwarded, accompanied by the name of the sender, to the Editor, ST. BARTHOLOMEW'S HOSPITAL JOURNAL, *St. Bartholomew's Hospital, Smithfield, E.C.*

The Annual Subscription to the Journal is 5s., including postage. Subscriptions should be sent to the MANAGER, W. E. SARGANT, M.R.C.S., *at the Hospital.*

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